

# HIV Treatment Optimism and Crystal Methamphetamine Use and Initiation among HIV-Negative Men who have Sex with Men in Vancouver, Canada: A Longitudinal Analysis

Has increased HIV treatment optimism changed crystal methamphetamine use among men who have sex with men in Metro Vancouver?

## What is the importance of this study?

- Previous findings from the BC-CfE's Momentum Health Study have shown that the implementation of Treatment as Prevention® (TasP®) has increased HIV treatment optimism among gay, bisexual and other men who have sex with men (gbMSM). This may potentially be associated with certain behavioural changes.
- This study examines associations between HIV treatment optimism and use and initiation of crystal methamphetamine (CM), which may have important public health implications.
- There is a link between CM use and high-risk sexual behaviour, including condomless anal sex and increased number of sexual partners.

## FACT BOX

Studies have shown that increased HIV treatment optimism may be associated with high-risk sexual behaviour; however, little is known about its effect on crystal meth use.

## How was this study conducted?

- Participants were asked whether or not they used CM in the past six months. If the answer was yes, participants were subsequently asked to specify the number of days they used CM in the past six months.
- The study also looked at the first reported use of CM among those who had not previously reported CM use during previous study visits.

## What are the key study findings?

- 10.3% of HIV-negative gbMSM reported any CM use in the previous six months. This proportion remained stable over the four-year study period.
- Among gbMSM who had no reported CM use at previous study visits, HIV treatment optimism was not associated with CM use or initiation in the past six months (after adjusting for confounding variables).
- Recent gamma-hydroxybutyric acid (GHB) and ecstasy use and having received/given drugs for sex were associated with increased likelihood of recent CM use.
- Despite engaging in high-risk sexual behaviour, the majority of participants who were HIV-negative and were using CM perceived they had a low risk of acquiring HIV.



## What do these findings mean?

- Use of CM among gbMSM in Metro Vancouver, Canada, was both prevalent and stable over time. This appears to be inconsistent with global trends of amphetamine use, which generally show increases over time.
- Increasing levels of HIV treatment optimism stemming from British Columbia's implementation of the TasP® strategy, through the universal and immediate provision of HIV antiretroviral therapy upon an HIV diagnosis, do not seem to be associated with increased CM use or initiation of use.
- CM use is not isolated from use of other substances, particularly those that have been shown to be associated with high-risk sexual behaviour (such as GHB). This finding contributes to other studies demonstrating polysubstance use that may ultimately increase HIV risk.
- Renewed interventions and health promotion efforts that are specific to gbMSM are needed to effectively address CM use in this population.

## What is the BC-CfE Momentum Health Study?

Evidence from British Columbia and elsewhere has demonstrated the expansion of access to antiretroviral HIV treatment (ART) can result in population-level reductions in HIV incidence. This is the concept behind the made-in-BC Treatment as Prevention® strategy, or TasP®, which aims to expand early HIV testing and treatment to improve patients' health and curb the spread of HIV. Gay, bisexual and other men who have sex with men (gbMSM) represent the most affected HIV risk group, both in BC and Canada. The BC-CfE Momentum Health Study is designed to measure changes in HIV risk behaviour, attitudes toward TasP® and the proportion of HIV-positive gbMSM with unsuppressed viral load over time in the Vancouver region. The study uses respondent-driven sampling (RDS) to obtain a more representative sample reflecting the diversity of the gbMSM population in Vancouver.

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